

## Lake Piney Z Lake Vegetation Index Results (8-2-2016)

The Lake Vegetation Index (LVI) is a multi-metric index that evaluates how closely a lake's plant community resembles one that would be expected in a condition of minimal human disturbance. It is based on a rapid field assessment of aquatic and wetland plants as indicators of various effects of human disturbance over time. Plants respond to physical disturbances such as introduction of exotic species or lakeshore alterations,

and chemical disturbance such as introduction of excess nutrients, particulates, or herbicides from the surrounding land uses.

The LVI method is performed from a boat, and involves dividing a lake into 12 units and identifying plants in 4 of the 12 units (Figure 1). Plants are identified in the selected unit by a visual boat "drive by" and also via a transect approach. The resulting data is used to calculate the LVI and is evaluated according to the scoring system in Table 1.

**TABLE 1. Category names, ranges of values for LVI, and example descriptions of biological conditions typically found for that category.**

Aquatic life use category	LVI Range	Description
Exceptional	78–100	Nearly every plant present is a species native to Florida, invasive taxa typically not found. About 30% of taxa present are identified as sensitive to disturbance.
Healthy	43–77	About 85% of plant taxa are native to Florida; invasive taxa present. Sensitive taxa have declined to about 15%.
Impaired	0–42	About 70% of plant taxa are native to Florida. Invasive taxa may represent up to 1/3 of total taxa. Less than 10% of the taxa are sensitive.

The Lake Vegetation Index score for Piney Z was 49, placing the lake's vegetative community in the healthy category.

Sixty four species were found during the survey. Buttonbush (*Cephalanthus occidentalis*), American lotus (*Nelumbo lutea*) and denseflower knotweed (*Polygonum densiflorum*) and the category I invasive exotic kudzu (*Pueraria montana*) were the most dominant species in the lake. Other native shoreline vegetation included; American elderberry (*Sambucus canadensis* subsp. *nigra*) red maple (*Acer rubrum*), coastal plain willow (*Salix carolina*) and pond cypress (*Taxodium ascendens*). Unfortunately,

water hyacinth (*Eichhornia crassipes*), wild taro (*Colocasia esculenta*), torpedo grass (*Panicum repens*) and Chinese tallow (*Sapium sebiferum*), and the previously mentioned kudzu (*Pueraria montana*) all listed as Category I Invasive Exotics by the Florida Exotic Pest Control Council <http://www.fleppc.org/> were found in or along the shoreline of Piney Z. Alligator weed (*Alternanthera philoxeroides*) is a Category II Invasive Exotic found in the lake.

For a complete list of plants found during the LVI survey, please see Table 2.

**TABLE 2. Scientific and common names of the plants identified during the Lake Piney Z LVI survey (8-2-16).**

<b>Species Name</b>	<b>Common Name</b>
<i>Acer rubrum</i>	red maple
<i>Alternanthera philoxeroides(II)</i>	alligator weed
<i>Ampelopsis arborea</i>	peppervine
<i>Baccharis glomeruliflora</i>	silverling
<i>Bacopa caroliniana</i>	lemon bacopa
<i>Bidens laevis</i>	smooth beggartick
<i>Bidens mitis</i>	smallfruit beggartick
<i>Boehmeria cylindrica</i>	false nettle
<i>Callicarpa americana</i>	American beauty berry
<i>Campsis radicans</i>	trumpet vine
<i>Cephalanthus occidentalis</i>	buttonbush
<i>Colocasia esculenta (I)</i>	wild taro
<i>Cyperus haspan</i>	haspan flatsedge
<i>Cyrilla racemiflora</i>	swamp titi
<i>Eichhornia crassipes (I)</i>	water hyacinth
<i>Eleocharis baldwinii</i>	road-grass
<i>Erechtites hieracifolia</i>	American burnweed
<i>Eupatorium capillifolium</i>	dogfennel
<i>Eupatorium</i> sp.	eupatorium
<i>Hydrocotyle</i> sp.	water pennywort
<i>Hygrophila costata</i>	Gulf swampweed
<i>Hygrophila polysperma</i>	dwarf hygrophila
<i>Hypericum mutilum</i>	dwarf St. Johns wort
<i>Hypericum</i> sp.	St. Johns wort
<i>Ipomoea</i> sp.	morning glories
<i>Juncus effusus</i>	common rush
<i>Juncus marginatus</i>	grassleaf rush
<i>Limnobia spongia</i>	frog's bit
<i>Liquidambar styraciflua</i>	American sweetgum
<i>Ludwigia leptocarpa</i>	anglestem primrose willow
<i>Ludwigia linearis</i>	narrowleaf primrose willow
<i>Luziola fluitans</i>	southern watergrass
<i>Mikania scandens</i>	climbing hempvine
<i>Myrica cerifera</i>	wax myrtle
<i>Nelumbo lutea</i>	American lotus
<i>Nuphar</i> sp.	spatterdock
<i>Nymphaea odorata</i>	fragrant waterlily
<i>Panicum hemitomon</i>	maidencane
<i>Panicum repens(I)</i>	torpedo grass

Species Name	Common Name
<i>Pinus taeda</i>	loblolly pine
<i>Polygonum densiflorum (glabrum)</i>	denseflower knotweed
<i>Polygonum hirsutum</i>	hairy smartweed
<i>Polygonum punctatum</i>	dotted smartweed
<i>Pontederia cordata</i>	pickerelweed
<b><i>Pueraria montana (I)</i></b>	kudzu
<i>Quercus nigra</i>	water oak
<i>Quercus virginiana</i>	southern live oak
<i>Rhexia mariana</i>	maryland meadowbeauty
<i>Rhus copallinum</i>	American pokeweed
<i>Rhynchospora inundata</i>	narrowfruit horned beaksedge
<i>Rubus trivialis</i>	southern dewberry
<i>Sagittaria lancifolia</i>	duck potato
<i>Sagittaria latifolia</i>	broadleaf arrowhead
<i>Salix carolina</i>	coastal plain willow
<i>Sambucus canadensis</i> subsp. <i>nigra</i>	American elderberry
<b><i>Sapium sebiferum (I)</i></b>	Chinese tallow tree
<i>Schoenoplectus californicus</i>	giant bulrush
<i>Smilax</i> sp.	greenbrier
<i>Solidago</i> sp.	goldenrod
<i>Taxodium ascendens</i>	pond cypress
<i>Taxodium distichum</i>	bald cypress
<i>Toxicodendron radicans</i>	eastern poison ivy
<i>Vitis rotundifolia</i>	muscadine
<i>Woodwardia areolata</i>	netted chain fern
<i>Woodwardia virginica</i>	Virginia chain fern

Names in bold are exotic

I - Category I Invasive Exotics

II - Category II Invasive Exotics

For additional information about the LVI please go to the Florida Department of Environmental Protection webpage;  
<http://www.dep.state.fl.us/water/sas/training/>

[docs/lvi\\_primer.pdf](#). For additional information about exotic Category I and II invasive exotic plants, please go to the Florida Exotic Pest Plant Council  
<http://www.fleppc.org/list/list.htm>.



**FIGURE 1. Lake Piney Z showing unit divisions. Circled numbers denote surveyed units.**